INTEREST ON INVESTMENT AS A FACTOR IN MANUFACTURING COSTS

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Accounting and economics are necessarily closely associated. The essential factors in economic discussions—rents, wages, and interest—are reckoned in accounting terms of debit and credit, and the reckonings are made according to working methods that the practice of accountancy has developed. It is the function of the economist to interpret the facts of industry and commerce, whereas the accountant provides the necessary methods and standards for measuring and recording the financial results of business operations.

It is important that both economist and accountant work according to sound principles, and any accounting device that makes the underlying principles of business stand out more clearly, is useful, not only to the business men immediately concerned, but also to the economists, who should thereby have better opportunities for analyzing and interpreting the business facts. Interest on investment as a manufacturing cost deserves consideration both for the principle involved and for its conspicuous usefulness in accounting practice.

The Principles Involved

Considering first the principles involved, we note that economists recognize capital as a factor of production and say that the return to those who furnish capital is interest. Another factor of production is management (service of the entrepreneur), and the return to those who manage is profit.

The fundamental distinction between interest for capital and profit for management is maintained through a long series of references to standard economic writings, and the reasoning of the economists is not at all confused by any question of who owns the capital.

Management must make outlays for wages and rates, and whenever the manager's capital is insufficient he must borrow. The sums paid by management to the capitalist are in return for the service or use of capital, just as wages and rent are paid for the services of labor or the use of land. If a manager is so for-

tunate as to own all the capital he uses, it is no less useful or serviceable on that account.

It seems strange that any difference of opinion should arise in applying these fundamental concepts, but much of current accounting practice departs from the standards of the economists, confuses cost for capital with profit for management, and sometimes reasons incorrectly about the return on capital both borrowed and owned. These errors arise chiefly because accountants constantly think and speak of "money invested" or "capital invested" instead of fixing attention, as do the economists, on physical assets as used in production.

Interest on Borrowed Money

The error has been frequently made in the past of reckoning the immediate outlay for borrowed capital as a cost; but if a proprietor has a physical plant and inventories to operate, the cost for using them is no greater because he is borrowing to provide some of these assets. Fortunately there has already been enough discussion of these matters among accountants so that mistakes are coming to be less frequent in the reasoning and accounting that relate to capital borrowed. Nearly every recent writer who has advocated the exclusion from cost of interest on investment admits that interest on borrowed money, whether secured by mortgage or otherwise, has no bearing on the issue, in either theory or practice.

The errors of reasoning chiefly arise with reference to capital owned, and the idea is frequently expressed in accounting practice and in accountants' writings that a proprietor gets the use of capital he owns without a cost to himself. The idea is not fully grasped, and seldom adequately expressed, that interest on investment is a charge to cost.

Confusion Between Cost and Profit

The confusion between cost and profit arises again and again, and frequently the argument that interest on investment is not a cost is based almost entirely on the *assertion* that it is a profit. Thus, A. Lowes Dickinson, C. P. A., declares in the *Journal of Accountancy* for August 1913, page 89: "The fundamental objection to treating interest and rent—which, except in so far as it includes compensation for services rendered, is only a form of interest—as an integral part of the cost of manufacture is

that all interest is in fact profit." This fallacy is repeated by every writer who alleges that there is an "anticipation of profits" by reckoning interest on investment into costs.

The same logical fallacy—of substituting assertion for argument or evidence—is involved in the declaration that the total return from an enterprise is to be considered as a profit divisible among the partners or "contributors" (Mr. Dickinson's term), namely: (1) the owners of the capital (other than land and buildings), (2) the landlord who has provided the land and buildings, and (3) the manager or entrepreneur. Obviously if interest on investment is profit, it is not cost, but let us have first an exact argument and sound reasoning as to whether it is cost, or profit. If the conclusion is that interest on investment is a cost, then wherever it appears, it is a cost that appears and not a profit.

Interest a Charge for the Use of Capital

Interest on investment is a cost and not a profit because it is a charge for the *use* of capital, and there is a cost for the use or service of capital just as for the use or service of labor or land. When attention is fixed on the fact that physical assets—plant and inventories—are in constant use, it is not hard to secure an agreement that the *use of such assets cannot be provided free*, and that to provide them must mean a cost to the one who makes this provision. If the management provides its own capital, the economic cost is no less than if others provide it. (Although Mr. Dickinson argues that interest on investment is not a cost, he correctly says, . . . "the manner in which capital is provided cannot affect the cost of manufacture.")[1]

Depreciation a Charge for Consuming Capital

Many writers say that depreciation is a charge for the use of capital. Thus, "an adequate adjustment in respect to the use of the machine is, or should be, secured through the charge for depreciation, or speaking more accurately the expired outlay upon productive plants."[2] And "Modern cost accounting does provide an adequate charge . . . for the use of manufacturing facilities by arranging for a proper charge to output for the depreciation caused by the manufacturing process. By this assessment for

[1] Quoted in *Journal of Accountancy*, May, 1913, by J. Lee Nicholson, from Mr. Dickinson's original article in the Papers and Discussions of the 23rd Annual Meeting of the Amer. Econ. Assn., April, 1911, p. 120.

[2] J. E. Sterrett, C.P.A., in *Journal of Accountancy*, April, 1913, p. 242.

depreciation . . . the entire capital investment is preserved without impairment."[3] Both of these quotations refute the argument they seek to make, for they both reveal the essential character of depreciation as a cost of *exhausting* an asset—*not a cost for* its *use unimpaired.*

Consider the analogy of a charge for the rent of a farm. Whatever the amount of that rent, the assumption is that the tenant will not exhaust the land, but by a reasonable rotation of crops and good use maintain its fertility. Even when he does this, and if he paid all taxes and insurance on the premises, he would still expect to pay something for the *use* of the assets placed at his disposal.

The analogy is perfect if one considers the rent of a city lot where there is no question of depreciation. If the tenant pays all the taxes, he would still expect to pay for, and there is a cost to someone to provide, the capital value that he uses.

The conclusion seems warranted, therefore, that, as a matter of correct principle, interest on investment is a cost for the *use* of capital, and that depreciation does not meet the requirements, since depreciation is a cost not for the *use* of capital but for the *exhaustion* or *consumption* of capital.

Practical Advantages

Every writer who has attempted anything like a thorough discussion of interest on investment admits that this element must in some way be included in the selling price. In other words, interest on the plant and inventories, which are the tangible expressions of the capital invested, must be taken into consideration at some point, for if the net profit resulting from trading does not exceed the amount which the capital might earn invested in standard bonds yielding ordinary rates of interest, then from an investment point of view the business is not worth while. The only question is then *at what point* interest should be included in the accumulation of a total cost to sell.

This brings us to an argument of utility or convenience, and the reasoning in regard to this important matter has been considerably obscured by constantly dealing in generalities, especially by the opponents of interest inclusion, who have never so far as the record is available, indicated clearly how they would deal with the practical problems which the cost accountant has to meet.

[3] Edward C. Gough, C.P.A., in *Journal of Accountancy,* June, 1913, p. 474.

Unit Costs for Continuous Process Industries

If the reasoning were confined to certain kinds of business, such as mining, transportation, or manufacture by continuous processes, like the making of flour, cement, pig iron, or wood pulp, it makes but little practical difference whether the desired information is secured by reckoning interest on investment into cost, or by leaving it out, and determining an average profit for the industry including a return on the capital. It does make a vast deal of difference, however, when one has to deal with the practical problems of cost accounting in most industries.

As Professor Cole says,[4] "No comparison is possible between different establishments, between different periods in the same establishment, or between different methods in the same establishment, if capital investment in labor-saving or material-saving machinery is neglected; for the very purpose of such investment is to save cost in other directions, and to neglect the capital sacrifice, made in saving other costs, is to neglect in part the very aim of cost accounting."

Space does not permit a *complete* exposition of the circumstances and the practical problems in management and cost accounting for which there is no satisfactory solution except by reckoning interest on investment.

Whenever it is desired (1) to compare the efficiency of alternative methods, (2) to measure the time element in costs, (3) to distinguish between the profits on two or more kinds of business (such as jobbing and manufacturing) by the same management, (4) to measure the cost of carrying inventories larger or smaller, or of more or less valuable material, (5) to record accurately the costs, and therefore the profits, of complete or incomplete plants (a machine shop with or without a foundry, an automobile factory making or buying its engines), (6) to compare manufacturing costs in owned or rented plants, (7) to compare the cost of power generated on the premises with purchased current, (8) to reduce varieties of financing to common terms, (9) to make a uniform cost plan for associations, the work cannot be well done unless interest on investment is reckoned as a factor in cost.

Business Policy and Unearned Burden

The inclusion of interest on investment in cost is an important factor in the determination of manufacturing and selling policy

[4] *Journal of Accountancy,* April, 1913, p. 234.

particularly during periods of curtailed production when part of a plant is lying idle, or in other words, when part of the capital is not producing. The principle is well established among experienced cost accountants that for each operation the normal burden should be determined based on normal activity of operation, and if a plant is not operating on a full schedule, the burden applicable to the idle time is a direct loss, and not an additional cost for the manufacture of the limited volume of output.

Current charges showing all the expense, including interest on the investment, of carrying this unused capacity for manufacturing are much more likely to arouse an executive or board of directors to action than a mere memorandum of approximate fixed charges, prepared as an estimate of the burden on unused manufacturing capacity. Since the determination of accurate rates for overhead or burden, and particularly sound reasoning in regard to these rates when they are determined, are about the most important functions of a cost department in a modern business, it seems clear that no pains should be spared to get the burden rates accurate, and particularly that they should be made to include all the recognizable costs of operation.

Bookkeeping for Interest on Investment

Since this paper is presented to a joint association of economists and instructors in accounting, it is pertinent to consider bookkeeping methods by which the interest charge may be calculated and applied to costs.

The method which is uniformly much to be preferred is that of determining the asset values of all kinds, wherever found, and calculating the interest thereon as a charge through the various channels of rent, equipment charges, inventory charges, etc., with a corresponding credit to an account known as Interest Charged to Cost, which is a credit each period to the Loss and Gain account, and as such is available for dividends, if not offset by losses of one kind or another. This method, in fact, is the only one that can be worked out in a practical way in an industrial establishment that requires careful analysis and subdivision of its overhead charges or burden.

The "Net Investment" Method

The other method is applicable to trading establishments (with only one kind of inventory, so that it is not necessary to reckon

fixed charges on different classes of the business) or to the very simplest manufacturing conditions. According to this method, interest charged to cost or expense will be divided between interest on borrowed money and interest on capital owned. The interest on borrowed money is interest on bonds, notes, and accounts payable. Interest on capital owned, *as a charge complementary to interest on borrowed money,* is reckoned on the "net investment" in the business, that is, on the difference between the sum of the assets—cash, notes and accounts receivable, raw materials, work-in-process and finished goods inventories, prepaid interest, insurance, etc., and the sum of all the liabilities—notes and accounts payable and all accrued items. (The reader will note the omission of plant and equipment assets.)

When this second method is used, the charge to cost will come in two parts: first, as interest is reckoned and paid for borrowed money; and, second, an amount by a journal entry, reckoning at the agreed-upon rate of interest on the net investment as above defined. The interest on the borrowed money will be a cash disbursement, when the interest is paid; the second part of the entry will be carried, as in the first method, as a credit to an income account known as Interest Charged to Cost.

A theoretical objection to reckoning the interest charged to cost in two parts in this way is that it involves the use of two rates, one of which is bound to fluctuate from time to time, as the current market rate for business paper goes up or down. This introduces a variable element into the calculation which is objectionable, particularly when uniformity is sought in accounting for an entire industry; as two business enterprises, otherwise substantially alike, may be financed so differently that one will have much of its interest charge derived from borrowed money, and the other will have none from that source, but all the interest cost reckoned as a rate on the investment. It is fundamentally correct to say that "the dollar owned does just as much work and should be compensated as is the dollar borrowed"; but since that is true, they should be compensated *alike* when used in the same business. As that is impossible according to the "net investment" method, with one or more rates on borrowed money and the agreed-upon and probably different rate on the net investment, it seems that that method should be abandoned in favor of one that does not involve such inconsistency.

Another very serious objection to this "net investment" method,

even within the limited field in which it can possibly be applied, is that it can rarely be used unmodified. In the Harvard System of Accounts for Shoe Wholesalers, published in the summer of 1916, there is the most authoritative exposition of this method known to the author, and there the reader will find that interest on land and buildings is specifically excluded from the "net investment" calculation, for the good and sufficient reason that it is a charge to a Rent account, which must be set up *completely*, and *independently of other expenses*, if any comparison is to be made between businesses which operate in premises owned and businesses which operate in premises rented. This difficulty would be much more serious in a manufacturing establishment, where interest on the investment must be reckoned for the equipment, usually in several different subdivisions, and on three, or perhaps four, different kinds of inventories.

Even in a merchandising business, such as wholesaling shoes, the plan as defined breaks down, to the extent that further exceptions must be made, if the proprietors are interested to get an accurate measure of the results between selling shoes, for example, and rubber footwear, which most of these establishments also handle. In a business like wholesale hardware it would be indispensable to reckon fixed charges on inventories by classes, in order to measure the results in a satisfactory way. Whenever fixed charges require any considerable division the "net investment" plan breaks down completely.

Whenever an attempt is made to use this method *attention should be fixed on the sum of the two charges*, namely, interest on borrowed money and interest on capital owned. If the business operates with extensive borrowing, the interest charge on that account will be large. If the owners have provided most of the capital, most of the amount charged into cost will be credited to the account Interest Charged to Cost, and then to Loss and Gain.

Some Objections Answered

The distinction of leadership in opposition to the inclusion of interest on investment as a charge to cost has generally been accorded to A. Lowes Dickinson, C.P.A., who presented his views some years ago before the American Economic Association. This article with some supplementary material was reprinted in the *Journal of Accountancy* for August, 1913, and is one of the ablest statements of the view that interest on investment is not properly

an element in manufacturing cost. Mr. Dickinson presents the same views in his well known book on *Accounting Practice and Procedure.*

Interest and Rent

By the same reasoning that supports this view, Mr. Dickinson reaches the conclusion that rent also should be excluded from manufacturing cost. This opinion will probably be condemned without discussion by any business man who has realized the stern necessity of paying rent in order to continue his manufacturing or other business operations.

Some emphasis on the landlord's functions, in fact, is pretty certain to convince a manufacturer that he has not reckoned on the whole cost of his operations with buildings and equipment owned until he has set up the accounting equivalent to what his landlord would have if the manufacturing operations were being carried on in rented buildings, or with leased machinery.

The landlord has to pay insurance, taxes, and repairs, unless these charges are assumed by a tenant as part of the terms of the lease. He must incur the loss from depreciation. Even the most liberal repairs will not entirely check the deterioration and obsolescence of a structure. It may serve well for a generation or longer, but the time surely comes when because of structural weakness, or the superiority of modern design or a better location, it cannot be used economically. This lack of fitness is essentially a landlord's risk.

The landlord expects, if possible, to charge as rent enough to make his property pay a fair return on the investment. If the title passes in course of time to the man who has hitherto been the tenant, does it cost him any less—in any sense, either practically or as an economic theory—to make shoes or shirts, furniture or machinery in that building because he now owns it? It is true that he no longer pays in cash the landlord's charge, but can anyone contend that his product is manufactured cheaper than before? The answer is a self-evidenced negative.

It is certainly an excursion into the depths of economic theory thus to compare interest and rent. In the article referred to, Mr. Dickinson places a footnote which reads, "It may be well to mention here that rent may include something more than interest, in which case a part thereof may properly be included in cost, and further that in the case of office rent, convenience and the relative unimportance of the amounts may sometimes justify their inclusion in the cost of production or selling, usually the latter."

The reader who will refer to Mr. Dickinson's article will see that although he speaks of rent, or rentals, as merely a kind of profit, and on that reasoning not chargeable into the cost of manufacturing, the footnote makes some recognition of the fact that certain expenses of doing business frequently comprised in the term *rent*, such as insurance and taxes on the buildings or rented equipment, and also depreciation and repairs, are inevitable items in a charge to cost, because of their actual and unavoidable character, which finds expression in the ultimate disbursement from the cash drawer.

The footnote refers to a paragraph in Mr. Dickinson's article in which he speaks of the landlord as a partner in the business. It seems to the present author unsound in theory and wholly impracticable to regard a landlord as a partner in a business in respect to the capital he has invested, but not in respect to the taxes and insurance that he pays, his outlay for repairs, or his loss through depreciation. Practical common sense seems to say that the landlord is a creditor rather than a partner or "contributor" (Mr. Dickinson's term) to the enterprise, so that what is paid to the landlord is clearly a cost.

Inflated Inventories

The objection is often made that to reckon interest into cost "inflates" the value of an inventory. This objection is a part of the same fallacy which alleges that interest is a profit, for if interest on investment is shown to be a cost, it logically and properly raises the value of manufactured goods as much as any other cost, and there is no "inflation" by including it in the inventory.

Now any inventory of manufactured goods has used capital, frequently in huge quantities, in the process of conversion from raw material to finished product. It has also used capital in the possession of the producer before coming to the manufacturer, and the purchase price to him is higher accordingly. If it has used capital it therefore has, indisputably, a greater cost. If the manufacturing business has been sensibly managed, the product is worth what it has cost in capital in its last stage (manufacturing), just as much as in any previous (producing) stage. To be specific, the capital cost of converting seasoned lumber into furniture is just as inevitably an addition to its cost, and just as fair an addition to its inventory price, as the cost of seasoning it beforehand.

In short, it takes capital to manufacture, more or less capital according to the kind of product made, and according to the manufacturing policy pursued. Frequently a liberal use of capital diminishes other costs, and the too meager use of capital increases other costs. Interest on investment is the conventional and logical way of expressing capital cost.

Accepting an arbitrary charge for depreciation as a good asset in the cost of manufactured goods, the logic seems unavodiable that there is no greater objection to an arbitrary charge for interest. Why is not one kind of cost as good an addition to value as another?

There is, therefore, no reason why an inventory should not be carried *at all its cost*, including so much thereof as may be due to interest on the investment employed.

While we are on the subject of inventory values, let us consider how trivial in comparison with some real inventory weaknesses is any possibility of "inflated" costs because of a calculation of interest on the investment. Accountants of high standing who object to reckoning interest on investment are known to the writer to have passed with approval inventories in which goods were taken higher than in the preceding annual inventory, because, forsooth, with a curtailed volume they "cost more to make" during the later year than during the earlier. In this proceeding we have an expense which is not in any proper sense cost-to-manufacture unhesitatingly added to inventory values "at cost."

Situations like this reveal most conclusively the fallacy of the old-fashioned plans of charging all burden into cost, or if a normal burden is first calculated, the mistake of adding a "supplementary rate." If the product of a plant is sold as fast as it is manufactured, there is no difference in the *net profit*, according to one plan or the other, but if inventories are changing in volume, there will be a very real inflation of profits and assets with an increasing inventory, and a very poor and unreal showing of profits per volume of sales during a period of diminishing inventories.

All accountants will agree that it is highly desirable for a correct view of profits that the inventories be priced correctly, especially so if there are fluctuations in the volume of inventory from one closing to another. If the custom is to overvalue inventories, profits are obviously overstated in periods when inventories accumulate, and understated in periods when stocks di-

minish. If it is the practice to undervalue the inventories, just the reverse effect is produced.

If it is desired to have the inventory conservatively stated in total, it is altogether better to make a suitable reserve to accomplish that result, rather than to leave out essential and calculable elements in the cost.

Auditors not skilled and experienced in industrial accounting certainly encounter difficulties in trying to decide on the significance and sufficiency of much that passes for cost accounting. The errors of this kind, committed in good faith but in blissful ignorance of realities, are likely to far outweigh any possible overvaluation resulting from debatable elements in a scientifically calculated cost.

Let no one infer from these remarks that the writer underestimates the importance of being conservative in valuing inventories. Accountants should strive zealously to see that items or values that do not belong in the inventory are excluded. There may be many considerations to influence the adoption of a price below cost on inventory items, or a liberal reserve against the total, or important sections, of the inventory. If there are good reasons for such action in a given case, by all means observe them consistently, but if cost is the basis, by all means get it *all* in.

Alleged Difficulty Regarding the Rate

An objection raised by those who oppose the inclusion of interest on investment is the difficulty of deciding as to the rate that should be used, but the argument on this point is really part of the confusion between interest and profit.

There will be no great difference of opinion among well informed people as to what is a fair investor's rate with proper security for principal and income and reasonable marketability. The Harvard Bureau of Business Research recommends the use of "the ordinary interest rate on reasonably secured long-term investment, in the locality in which the business is situated. In measuring the result of his business, as has already been pointed out, the business man, if he thinks about the subject at all, computes the amount of interest which his capital would earn if he invested it in something else. The Bureau has determined from its inquiries that there seems to be in each locality a definite idea as to what constitutes a current rate of interest."

It might well be added that the rate of depreciation is as diffi-

cult to determine, and as a matter of practical experience a group of business men are better informed and can come nearer to agreeing on a suitable rate of interest to charge than they can on suitable rates of depreciation.

As to the validity of an interest rate to be used in cost accounting, nothing more is required than that it should be reasonable and *agreed upon* by the persons concerned. This is particularly true when a group of competitors are interested in establishing a plan of uniform accounting.

Significance of the Rate Chosen

One of the most technical and scholarly articles that has ever appeared in opposition to the inclusion of interest on investment as a charge to cost is that by George O. May, C.P.A., in the *Journal of Accountancy* for June, 1916. Mr. May's article is given over chiefly to a discussion of the rate that shall be used.

The principal argument against the inclusion of interest in Mr. May's article is based on a confusion between the returns on capital and the returns to the proprietor for his skill or risk. It is a mistake to refer, as Mr. May does, to "compensation of the proprietor's capital." The returns for the proprietor's *capital* can be reckoned by other standards with considerable accuracy, and whatever else he gets is a return for something besides capital.

Another opponent of including interest, W. P. Hilton, C.P.A., writing in the *Journal of Accountancy* for October, 1916, speaks of adopting a plan whereby the "reasonable expectancy rate" is made a factor of expense.

We can also accept Mr. Dickinson's statement that "if any interest rate is to be assumed, it can only be a rate which represents a fair compensation for the use of the capital." It is true that proceeding from this point Mr. Dickinson argues that in the compensation for the capital there is involved a large and important element of risk, and any argument on this point must admit that there is no interest rate in practice which is entirely free from risk. The current rate, or reasonable expectancy, however, is generally understood among business men.

How Business Men Regard Interest on Investment

In the arguments of Mr. Dickinson, Mr. May, and others who oppose the inclusion of interest, reference is made repeatedly to the return on the investment in a given industry. Nearly every

accountant would agree with Mr. May when he says, "The rate which will attract capital into an industry would seem to be one of the things which accounts should help to determine . . .," but the rate which will prove attractive in a given industry can be determined with even greater clearness by charging interest into cost than by leaving it out.

If the attention of prospective investors is fixed on the probable rate of return on capital embarked in a particular enterprise, it seems certain that they will make a comparison between the conventional investors' rate and the amount that they can expect to earn from the investment in question, or, in other words, *how much better they can do in the new industry* than with their capital invested as it is.

Capital has a fairly well-determined market value, but loss or gain is a function of management. Men may be more or less successful, have more or less good luck, but irrespective of these considerations, they have an inevitable fixed charge for capital, just as inevitable as a fixed charge they would have for rent if they were engaged in business using leased property.

When reference is made to "that rate which will attract capital into an industry," on a premise that interest on the investment is excluded, the reasoning is that the total net business return is a residue. This is the idea which the modern economists refute when they insist that the charge for capital shall be paid first, and that the residue shall be profit only.

The Government's Attitude Towards Interest

Prior to the war, the principal official statement on behalf of the United States Government in regard to the treatment of interest in costs was in a pamphlet published by the Federal Trade Commission under date of July 1, 1916, "Fundamentals of A Cost System for Manufacturers."

Under the subject of building expense, page 11, the pamphlet says: "Rent includes a return on the investment in addition to the items named (the items named were insurance, taxes, depreciation, repairs, heat, light, elevator and janitor service, and water). So when it is desired to make comparisons between plants where the building is owned and where it is rented, the return on the investment must be taken into consideration." Since this comparison is one that must frequently be made, it was helpful to have the Federal Trade Commission express the correct view so concisely.

In a passage amounting to a page of fine type on the general subject of interest, the Commission said, "The cases where it is desirable to include interest in cost may be grouped under two heads:

"1. Where materials have to be stored for long periods while a seasoning process is being completed.

"2. Where it is desired to show the effect of variations in the amount of capital employed and the term of employment."

Regarding a seasoning process the pamphlet says, . . . "the interest on the capital locked up during the seasoning process forms in a sense a direct part of the cost of material. If the material were purchased in a seasoned condition, a higher price would have to be paid, and this price would at least include interest and other carrying charges."

Regarding expensive equipment and the length of time to complete various processes, the pamphlet says, "It is impossible to get true relative costs unless consideration is given to interest on the capital employed."

Interest in War Contracts

The definition of cost has been an important practical problem for various government departments since the United States entered the war in the spring of 1917, and in respect to interest on investment the situation has not been well handled.

In the summer of 1917 a pamphlet was issued containing the recommendation by an Interdepartmental Conference on Uniform Contracts and Cost Accounting Definitions and Methods. Among the items included in a "general definition of cost" was "a fair proportion of overhead expenses."

As the general definition of cost was originally drafted, interest was excluded, *but not rent*, and in a letter of protest distributed by the writer under date of August 8, 1917, the comment was made that "the practical result of allowing rent and disallowing interest is that a manufacturer in a rented plant reckons in his bookkeeping cost economic factors which the manufacturer who owns his plant is required, by the proposed regulations, to eliminate. There are enough manufacturers in the United States operating in rented plants to justify the statement that this proceeding is a *grievous injustice to the men who are operating in plants that they own.*"

Regarding the exclusion of interest on investment, this same

letter of protest included the following comments: "To exclude interest on the investment, furthermore, operates to the practical disadvantage of the manufacturer who is conducting a business including all the processes from the initial conversion of raw material to the finished product, in contrast with a manufacturer who buys a great many manufactured parts and whose product, similar to his competitor's in other respects, is largely made by assembling. The second manufacturer naturally treats his purchases of parts as material costs, and he necessarily acquires them *at a price which has included profits equivalent to or greater than interest on the investment* to the previous manufacturer who produced them. A manufacturer who, instead of buying and assembling, plans comprehensive detail manufacturing for every step that his finished product requires, should not be penalized on that account in stating costs and reckoning profits thereon."

When the pamphlet was finally printed it read, "By the term 'overhead expenses' is meant the indirect labor and other manufacturing expenses, and the general and administrative expenses applicable to and necessary in connection with the production of the article contracted for hereunder. It does *not* include (among other items) the following: *Interest, rent,* advertising, collection expenses, credit losses and customers' discounts, and such taxes as income and excess-profits taxes imposed by the United States Government (interest, rent, and selling expenses, will not be allowed as part of the overhead cost but may be the subject of special compensation when so stipulated in the contract)."

We have no knowledge of reasonable rent charges being thrown out of government contracts during the years 1917 and 1918, but numerous instances have been reported of interest on investment being excluded. This method of handling the contracts has given an important and unfair advantage to the manufacturer whose product is largely assembled or who is renting buildings or equipment.

Significance of Turnover

It should be clearly understood that the issue raised in respect to government contracts is not one of more profits or less. When the manufacturing cost has been correctly determined, it may be fair to the manufacturer to give him a 10 per cent profit, or it may be that he should have more than 10 per cent on goods which take a long time to manufacture and accordingly have a slow

turnover, or perhaps a great deal less than 10 per cent on goods which have a rapid turnover.

The statement is familiar enough to accountants and students of business affairs that a rapid turnover increases profit, or makes possible a smaller margin of profit on individual sales. Analyzing this situation further, it is seen to be in substance merely that the business with the rapid turnover uses the capital in question a much shorter time between the purchase of the raw material and the sales.

The Relation Between Capital and Labor

In Mr. Dickinson's original article, which bore the title "The Fallacy of Including Interest and Rent as Part of Manufacturing Cost,"[5] he touches on the relation between capital and labor in the following terms, "The only rate which could be justified in argument would seem to be that inasmuch as the capitalists have charged into costs and obtained for themselves the rate *which they might think they ought to realize on the whole business* (italics are not in the original), the balance of it, which under such a procedure would be called profit, does not belong to them at all, but to those who purchased goods from them, to the general public, or to the government. This is an argument which would hardly be admitted by a manufacturer." This passage quoted from Mr. Dickinson's article requires a restatement to correspond with the facts in the business world. It is not intended, by those who advocate interest in costs, that capitalists should charge into costs, and obtain for themselves, the rates which they think they ought to realize in *a particular business*, but rather that they should charge into cost the rate which they ought to realize *from any business use of capital*, and that they are entitled to something in addition to that rate for the *risk* that they incur *for running the particular business in question.*

In an introduction accompanying the reprint of this original article, Mr. Dickinson says: "If any interest rate is to be assumed it can only be a rate which represents a fair compensation for the use of the capital. If the selling price or rate yields a profit over and above the cost of material and labor, a fair return on the capital employed and fair compensation for management, it would seem that to the extent of this profit the price charged is excessive, at least where the manufacture is not conducted under some patent or other special process for which a further com-

[5] *Journal of Accountancy*, December, 1911.

pensation may fairly be exacted. This is not a conclusion that a manufacturing or public service corporation whose prices or rates are attacked can afford to admit, more especially as those attacking the rates are not bound by the interest rate adopted, as the corporation might be."[6]

There may be some doubt in the minds of the general public as to what is a fair compensation for management, but there can be no doubt that any article or service provided for the public must be paid for at a price which will include the cost of material, labor, and burden, and a fair return on the capital employed. It seems almost certain that if these factors are set forth clearly, the argument will take shape much more rapidly in regard to the fair compensation for management. It is generally true that the more clearly a case is stated, the more quickly is it understood, and a conclusion reached equitable to all concerned.

This argument involving a calculated return on capital and a reward for management is taken up more in detail by Mr. George L. May in his article in the *Journal of Accountancy* in June, 1916. Mr. May says: "Upon any great question the tendency must be to reduce the issue to the simplest terms. The fair disposition of the results of organized industry is one of the greatest of questions, and the issue here is reduced in the public mind to one between labor and capital—everything that does not go to labor is regarded as going to capital. The elements other than labor entitled to compensation may in the economic mind be subdivided, and the economist may attempt to differentiate between pure interest, compensation for risk, the reward of the entrepreneur, etc., but in the public mind and for practical purposes these elements are combined in capital. Moreover, in general, once an enterprise is launched these elements are vested in the same body of individuals, so that the fact that the isolation of the elements is not possible except in theory does not cause any difficulty in practice."

There may be difficulties, as Mr. May says, in interpreting to the public mind the "differences between pure interest, compensation for risk, and the reward for the entrepreneur." Mr. May realizes, of course, that whenever there are bondholders of a corporation the capitalist element in that enterprise is not wholly "vested in the same body" as the management, and that distinction applies more or less when there are preferred stockholders. It is

[6] *Journal of Accountancy,* August, 1913, p. 90.

surprising to read that if no interest is charged on capital, it is thereby easier to establish the claim of capital as one that must first be satisfied from the residuum of conducting business.

In fact, a writer none too friendly to the idea of interest on investment, namely, Mr. George Mahon, makes a very different interpretation of the business man's interest from that made by Mr. Dickinson and Mr. May. Mr. Mahon's view is apparently that the inclusion of interest in cost tends to insure to the capitalist at least a part of the return to which he is entitled, provided of course that there is something to divide.[7]

This discussion touches on the issue which is at present raised between the Labor party in England as represented by Mr. Arthur Henderson, and the Women's party as represented by Mrs. Pankhurst. The Labor party would apparently insist on labor having a large share of all that accrued in the way of earnings from a business after an established minimum of returns has been accorded to the capitalist. Mrs. Pankhurst, on the other hand, says that the able managers of the business are entitled to a large return for their management, recognizing that at present only such large rewards will induce the skilled accomplishment which society needs from these experienced managers, in order to bring the total production of the community to its highest point.

Whichever view is taken as to how the division is made, it seems a fairly safe prediction that the reasoning and sentiment of the community will rather steadily advance towards that simplification of the terms, and better understanding of the argument which is accomplished by reckoning interest on the capital as an undisputed minimum of return, and therefore limiting the debate to the profits, if any accrue, after the capital return has been provided for.

[7] See *Journal of Accountancy,* October, 1916, p. 255.